

NATIONAL INSTITUTES OF HEALTH  
WARREN GRANT MAGNUSON CLINICAL CENTER  
NURSING DEPARTMENT

**Standard of Practice: Care of the Severely Neutropenic (ANC < 500) Patient**

**I. Assessment:**

- A. The inpatient nurse will assess the following potential sites of infection q 12 hrs as clinically applicable; the outpatient nurse will assess the following potential sites of infection as clinically applicable with each patient encounter:
  1. VADs: catheter entrance, exit and tunnel sites for skin breakdown, erythema, pain/ tenderness, discharge, swelling, or warmth
  2. Skin: skin for any breakdown, lesions, rashes or pain. Be especially alert to complaints of pain/ discomfort in areas of skin folds, including buttocks, axilla, perineum, genital area, and breasts. Examine these areas as clinically indicated.
  3. GU: changes in urinary function including frequency, dysuria, hematuria; change in color/appearance/odor of urine.
  4. GI: bowel function for consistency, pain, frequency, color and amount of stool; mouth and throat for redness, ulcers, white patches, soreness/tenderness, pain with eating/drinking, dryness or bleeding.
  5. Lungs: breath sounds and respiratory status for any changes in pattern, effort, dyspnea, cough, or sputum production (amount and color).
  6. HEENT/Neurological: headaches, neck stiffness, mental status changes, focal neurological deficits, sinus pressure/congestion/drainage/pain, or orthostatic dizziness.
- B. Vital Signs:
  1. Inpatients: Monitor blood pressure, temperature, pulse, and respiratory rate at least every 8 hours for afebrile patients. For febrile patients, the minimal standard is every 4 hours. Obtain an order for vital sign parameters for physician notification.
  2. Outpatients: monitor vital signs with each patient encounter. (Neutropenic outpatients will be instructed to monitor their temperature at home according to Appendix A.)

**II. Interventions:**

- A. Inpatient nurse will monitor CBC/differential at least daily; outpatient nurse will monitor CBC/differential prn or as indicated by the specific research protocol, generally twice a week.
- B. Instruct patient regarding meticulous and frequent oral hygiene, including the use of a soft/ultra soft toothbrush, mouth rinses with alcohol-free mouthwash at minimum in morning, after each meal and bedtime. Flossing is not recommended for a platelet count equal or less than 50,00 and/or an ANC equal or less than 500. Refer to Oral Care Standard of Practice as needed.
- C. Preserve skin integrity by instructing the patient to maintain good personal hygiene. Patients should shower daily using a mild, fragrance-free soap and apply fragrance-free lotion to prevent dry/cracking skin. Electric razors should be used to prevent breaks in the skin.

- D. Use strict aseptic technique when performing all invasive procedures and when manipulating any invasive tubing. Avoid IM injections that could lead to skin abscesses.
- E. Prevent rectal trauma by avoiding rectal temperatures, enemas, suppositories or digital exams. Keep the peri rectal area clean and dry. Reduce the risk of peri anal trauma/infection by cleansing with sitz baths and applying skin barrier creams as needed. Minimize vaginal trauma by avoiding use of tampons or vaginal suppositories. Discuss sexual activity guidelines with team and counsel patients as to safe sexual practices as it relates to neutropenic state .
- F. Patients, staff and visitors must adhere strictly to guidelines regarding hand washing. Patients should avoid contact with individuals of all ages with signs/symptoms of a suspected transmissible illness. Patients should avoid aerosolized bursts of organisms, construction sites and crowds of people where transmissible respiratory pathogens (aspergillus, RSV, Influenza, and para-influenza) are potentially present. When any exposures are likely, a mask is recommended.
- G. Contact with persons who have recently received any live vaccines (usually Sabin oral polio or chicken pox/varicella should be avoided. Patients should check with their NIH health provider before receiving any vaccines or immunizations.
- H. Instruct patient to avoid handling potted plants, sniffing fresh flowers and contact with stagnant water (humidifiers, water pitchers, water in a vase). Flowers should be discarded when they show any signs of wilting. Outpatients should be reminded to avoid gardening or handling cat litter/pet excrement.
- I. Provide nutritional counseling with patient and family in collaboration with CC Nutrition Department and the *Don't Let Your Food Make You Sick* handout, Appendix B.
- J. Patient Teaching:
  - 1. Reinforce neutropenic guidelines using the “Living with cancer” series, Appendix C.
  - 2. Provide opportunity for patient and family to ask questions.

### **III. Documentation:**

Document in MIS or other Medical Record approved form.

- 1. Applicable assessment parameters every 12 hours, (for outpatients with each patient encounter), or with any change in clinical presentation.
- 2. All interventions and the patient/families response
- 3. All patient/family education
- 4. The nurse will document any telephone contacts with patient/family related to neutropenic status

### **IV. References:**

- A. Jigjes, W., Armstrong, D., Bodey, G., et al., Guidelines for the Use of Antimicrobial Agents in Neutropenic Patients with Unexplained Fever, *Clinical Infectious Diseases* (25), 551-73, 1997.
- B. Pizzo, P. Empirical Therapy and Prevention of Infection in the Immunocompromised Host., *Special Problems*, 2686-2696.
- C. Patterson, J. Isolation of Patients with Communicable Disease. Mayhall, C. *Hospital Epidemiology and Infection Control*, 1032-1050.
- D. Brandt, B. 1990, Nursing Protocol for Patient with Neutropenia. *Oncology Nursing Forum*, Supp.17 (1), 9-15.

- E. Poe, S., Larson, E., McGuire, D., Krumm, S. 1994. A National Survey of Infection Prevention Practices in Bone Marrow Transplant Units. Oncology Nursing Forum, 21 (10), 1687-1694.
- F. Wujcik, D. 1993, Infection Control in Oncology Patients. Nursing Clinics of North America, 28(3), 639-650.

**V. Attachments:**

- A. Fever Guidelines
- B. CC Nutritional Department “Don’t Let Your Food Make You Sick”
- C. Neutropenic Guidelines, “Living With Cancer” series  
[http://www.cc.nih.gov/ccc/patient\\_education/CaTxeng/neutropenia.pdf](http://www.cc.nih.gov/ccc/patient_education/CaTxeng/neutropenia.pdf)

Approved:

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